Amendments to the Claims

1. (Currently amended) A syringe pump adapted to receive a syringe having a plunger movable along a barrel, the pump comprising: a plunger head actuator; an electric motor; a drive mechanism between said motor and said plunger head actuator to move said plunger head actuator and hence said plunger along said barrel; a speed sensor arranged to measure the rotational speed of the motor; and an arrangement for detecting a fall in the rotational speed of the motor indicative of an obstruction to movement of said plunger and for stopping the motor in response to the detected fall in speed; wherein the speed sensor is arranged to produce pulses at a frequency dependent on the speed of said motor, and wherein the arrangement for detecting a fall in speed of the motor is arranged to time the intervals between said pulses against a preset variable minimum time.

2-3. (Canceled)

4. (Previously presented) A pump according to Claim 1, wherein the arrangement for detecting the fall in speed of the motor includes a store containing information as to the minimum measured time of said intervals, and a comparator operable to compare the time of intervals of subsequent pulses with said minimum time to determine whether said intervals exceed a predetermined multiple of said minimum time.

5. (Previously presented) A pump according to Claim 1, wherein the pump includes a shaft coupled with said motor, wherein said speed sensor includes an encoder connected with said shaft, and wherein said encoder produces said pulses.

6. (Original) A pump according to Claim 5, wherein said encoder is an optical encoder.

7. (Canceled)

8. (Original) A pump according to Claim 1, wherein the pump is arranged to generate an alarm signal when obstruction is detected.

9. (Currently amended) A syringe pump adapted to receive a syringe having a plunger movable along a barrel, the pump comprising an electric motor; a shaft rotated by the motor; a plunger head actuator driven by said shaft to displace said plunger along said barrel; a speed sensor including an encoder coupled with said shaft to produce an output dependent on movement of said shaft; and an arrangement for detecting a fall in the rotational speed of the motor indicative of an obstruction to movement of said plunger and for stopping the motor in response to the detected fall in speed; wherein the speed sensor is arranged to produce pulses at a frequency dependent on the speed of said motor, and wherein the arrangement for detecting a fall in speed of the motor is arranged to time the intervals between said pulses against a preset variable minimum time.

10. (Currently amended) A syringe pump adapted to receive a syringe having a plunger movable along a barrel, the pump comprising: an electric motor; a leadscrew rotated by said motor; a plunger head actuator movable along said leadscrew on rotation of said leadscrew so as to move said plunger along said barrel; an encoder mounted with said leadscrew and rotated with said leadscrew, said encoder providing a pulse output indicative of speed of rotation of the motor; a control unit arranged to time intervals between pulses of said pulse output against a preset variable minimum time~~,~~ to determine ~~from the time of said intervals~~ when the speed of said motor falls as a result of obstruction to movement of said actuator and to stop the motor in response to the detected fall in speed; wherein the pulses are produced at a frequency dependent on the speed of said motor.

11. (Withdrawn) A method of detecting obstruction to movement of a plunger head actuator in a syringe pump, comprising the steps of monitoring the speed of a motor driving said plunger head actuator and detecting when said speed falls as a result of obstruction to movement of said plunger head actuator.

12. (Withdrawn) A method according to Claim 11, including the steps of producing pulses at a frequency dependent on motor speed and timing the interval between pulses to detect when motor speed falls.

13. (Withdrawn) A method according to Claim 12, including the steps of storing information as to the minimum measured interval between pulses and comparing intervals between subsequent pulses with a predetermined multiple of said minimum interval to determine when said intervals exceed said predetermined multiple of said minimum interval.

14. (Withdrawn) A method of detecting obstruction to movement of a plunger head actuator in a syringe pump, comprising the steps of: rotating a motor to drive a plunger head actuator; generating a pulsed output from an encoder rotated by said motor; timing intervals between pulses in said output; storing information as to the minimum measured interval between pulses; and comparing intervals between subsequent pulses with a predetermined multiple of said minimum interval to determine when said intervals exceed said predetermined multiple of said minimum interval.